Agency for Healthcare Research and Quality
Advancing Excellence in Health Care

NATIONAL GUIDELINE CLEARINGHOUSE

General

Guideline Title

Practice parameters for the surgical treatment of ulcerative colitis.

Bibliographic Source(s)

Ross H, Steele SR, Varma M, Dykes S, Cima R, Buie WD, Rafferty J, Standards Practice Task Force of the American Society of Colon and Rectal Surgeons. Practice parameters for the surgical treatment of ulcerative colitis. Dis Colon Rectum. 2014 Jan;57(1):5-22. [299 references] PubMed

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Cohen JL, Strong SA, Hyman NH, Buie WD, Dunn GD, Ko CY, Fleshner PR, Stahl TJ, Kim DG, Bastawrous AL, Perry WB, Cataldo PA, Rafferty JF, Ellis CN, Rakinic J, Gregorcyk S, Shellito PC, Kilkenny JW 3rd, Ternent CA, Koltun W, Tjandra JJ, Orsay CP, Whiteford MH, Penzer JR, Standards Practice Task Force American Society of Colon and Rectal Surgeons. Practice parameters for the surgical treatment of ulcerative colitis. Dis Colon Rectum. 2005 Nov;48(11):1997-2009. [165 references]

Regulatory Alert

FDA Warning/Regulatory Alert

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- May 12, 2016 – Fluoroquinolone Antibacterial Drugs : The U.S. Food and Drug Administration (FDA) is advising that the serious side effects associated with fluoroquinolone antibacterial drugs generally outweigh the benefits for patients with sinusitis, bronchitis, and uncomplicated urinary tract infections who have other treatment options. For patients with these conditions, fluoroquinolones should be reserved for those who do not have alternative treatment options.

Recommendations

Major Recommendations

The levels of evidence and the grades of recommendations (1A-2C) are defined at the end of the "Major Recommendations" field.

Indications for Surgery

Acute Colitis

1. Patients with clinical evidence of actual or impending perforation should undergo urgent surgery. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Perforation in patients with toxic colitis is associated with a high mortality rate (27%–57%), regardless of whether the perforation is contained or free. The mortality rate also increases as the time interval between perforation and surgery increases. Signs of impending perforation may be masked by ongoing medical therapy. Persistent or increasing colonic dilation, pneumatosis coli, worsening local peritonitis, and the development of multiple organ failure can be signs of impending or actual perforation. Likewise, localized peritonitis may reflect local inflammation or may be a sign of impending perforation. Perforation may also occur without dilation; these patients often do not exhibit classic signs of peritonitis.

2. For patients with moderate to severe colitis, early surgical consultation should be obtained. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   Recent consensus statements from surgical and gastroenterology experts have suggested that a failure of primary therapy or those patients being considered for monoclonal antibody or cyclosporine therapy warrant surgical consultation. It is important to keep in mind that, even in those patients who have a good initial response to medical therapy, the eventual need for colectomy ranges from 20% to 80%. Early involvement of the surgeon is important to not only follow the patient's clinical course, but also to provide information and answer questions should the need for surgical therapy eventually arise. This is best performed in an elective setting rather than urgently in a patient who has perforated or is clinically deteriorating. Concomitant involvement of an enterostomal therapist is also valuable in providing education and perioperative ostomy marking should the need arise.

3. Patients whose condition worsens on medical therapy or who do not make significant improvement after a period of 48 to 96 hours of appropriate medical therapy should be considered for either a second-line agent or surgery. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Limited evidence suggests that intravenous cyclosporine is more effective than standard steroid-based treatment for severe colitis and has been advocated as a second-line agent before colectomy, in part, secondary to its rapid onset of action and short half-life.

   The need for and timing of surgery in patients whose condition seems to "plateau" after a period of initial improvement often is difficult to judge. Patients with more than 8 stools per day, or 3 to 8 stools and a C-reactive protein >45 mg/mL after 3 days of therapy, have an 85% chance of requiring colectomy during the same hospitalization, regardless of whether corticosteroid or cyclosporine treatment is used. Patients who have a contraindication to (or do not desire) monoclonal antibody or cyclosporine therapy, or when steroids fail, should be considered for surgery. Most series define a period of 48 to 96 hours after which surgery is indicated if the patient does not improve or worsens, although evidence specifying the most appropriate time period for a trial of medical therapy, especially with "second-line" agents, is lacking.

4. A decision regarding the response to second-line or "rescue" therapy should be made within 5 to 7 days after initiation. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   Both cyclosporine and monoclonal antibody therapy have been shown to have mean response times of 5 to 7 days in controlled trials. Population-based data evaluating timing of colectomy in ulcerative colitis (UC) have also demonstrated that mortality rates increase as operative timing progresses from within 3 to 6 days (odds ratio [OR], 2.12; 95% confidence interval [CI], 1.13–3.97) and 11 days (OR, 2.89; 95% CI, 1.41–5.91). Longer waiting times may result in worsening physiological reserve, further depletion in nutrition stores, and an inappropriate delay in surgery with no apparent gain.

Intractability

1. Surgery is indicated in chronic UC when medical therapy is ineffective. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Disabling extraintestinal manifestations of UC may prompt resection. Typically, episcleritis, erythema nodosum, aphthous ulcerations, and large joint arthropathy are more likely to be responsive to colectomy. Hepatic, vascular, hematologic, cardiopulmonary, and neurological comorbidities typically are not. Growth failure in children is another form of intractability that may require colectomy. Surgery should be considered if growth failure persists despite maximal nutritional and medical therapy, with data reporting that surgical resection is at least as effective as immunosuppressants for allowing "catch-up" in growth status.

Cancer Risk and Surveillance

1. Patients with long-standing UC should undergo endoscopic surveillance. Grade of Recommendation: Strong recommendation based on

moderate-quality evidence, 1B.
Patients with extensive colitis (disease proximal to the splenic flexure) should be advised to undergo endoscopy after 8 years of disease and should have a surveillance colonoscopy performed every 1 to 2 years. This interval will depend on the presence or absence of dysplasia in biopsy specimens (see the recommendation below).

Patients with 2 successive negative surveillance colonoscopies may undergo surveillance colonoscopy at 1 to 3 years, although this should be tailored to the patient. There are additional data to indicate that patients with concomitant primary sclerosing cholangitis are at an even higher risk for malignancy, with a cumulative risk of cancer or dysplasia approaching 50% at 25 years of disease. Therefore, it is recommended that these patients adhere to annual surveillance endoscopy regardless of previous normal findings.

2. Endoscopic surveillance should involve 2 sets of 4-quadrant random biopsies at ~10-cm intervals throughout the colon and rectum, along with directed biopsies of suspicious lesions. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
The recommended surveillance endoscopy technique normally involves 2 sets of 4-quadrant biopsies in each colon segment (right, transverse, left, rectosigmoid), producing ~32 random biopsies divided into 4 specimen cups. A minimum of 32 random biopsies has been shown to result in an 80% to 90% sensitivity for detecting dysplasia. Directed biopsies of polypoid lesions, masses, strictures, or irregular mucosa distinct from surrounding inflammation should also be performed. Additionally, adjacent "normal"-appearing tissue, when present, should be sent for comparison. Polyps that appear potentially dysplastic can be removed by polypectomy, and the adjacent flat mucosa also should be biopsied to exclude dysplasia.

3. Total proctocolectomy, with or without ileal pouch-anal anastomosis (IPAA), is recommended for patients with carcinoma, nonadenoma-like dysplasia-associated lesion or mass, or high-grade dysplasia. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
Unlike sporadic cases, cancer in UC patients may not always follow a progression from normal epithelium to low-grade dysplasia, high-grade dysplasia, and finally invasive malignancy. Nevertheless, dysplasia detection by conventional histopathologic assessment of colonoscopic biopsies remains the criterion standard to identify patients at highest risk of developing cancer in UC. Consideration should be made for all biopsies concerning for high-grade dysplasia to be confirmed by 2 independent gastrointestinal (GI) pathologists when possible.

   Findings of colorectal cancer, a *nonadenoma* dysplasia-associated lesion or mass (DALM), or high-grade dysplasia are almost uniformly accepted as indications for proctocolectomy with or without IPAA, because approximately 43% to 50% will have concomitant malignancy at the time of colectomy.

4. Total proctocolectomy, or surveillance endoscopy, is recommended for patients with UC and low-grade dysplasia. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1C.
It is important that patients are counseled about the potential risks and benefits of continued endoscopic surveillance versus surgical therapy.

5. Patients with UC who develop a stricture, especially with long-standing disease, should typically undergo resection. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
Among the most common manifestations of colorectal carcinoma in chronic UC are colonic strictures, which develop in 5% to 10% of patients with UC. Although the majority of strictures are benign, as many as 25% will be malignant, and malignant strictures account for up to 30% of cancers occurring in UC patients. Although biopsy may reveal dysplasia or malignancy, a negative biopsy may not be reliable because of the risk of sampling error and the more infiltrative nature of colitis-associated malignancies. Therefore, in general, all patients with strictures should undergo an oncological resection.

Surgical Options

Emergency

1. The procedure of choice for emergency surgery in UC is total or subtotal abdominal colectomy with end ileostomy. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
The surgical goals in the acute setting are designed to remove the bulk of the diseased bowel, restore patient health with the greatest reliability and least risk, and preserve reconstructive options after the patient has recovered and medications are withdrawn. Subtotal colectomy with end ileostomy and Hartmann closure of the distal bowel or creation of a mucous fistula is a safe and effective approach. Although, historically, this has been performed via a laparotomy, multiple reports have confirmed the feasibility and safety of a minimally invasive approach in this setting. Extrafascial placement of a closed rectosigmoid stump may be associated with fewer pelvic septic complications and facilitates subsequent pelvic dissection. Transanal drainage of the distal stump may further decrease the risk of pelvic sepsis. The resected colon specimen should be examined microscopically for confirmation of UC or Crohn's disease, because the likelihood of an altered diagnosis is appreciable after colectomy.

Elective Surgery

1. Total proctocolectomy with ileostomy is an acceptable surgical option for patients with UC. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Total proctocolectomy with ileostomy has been the conventional operative approach for patients with UC and may be considered a benchmark procedure with which all other operations are compared. It is a safe, effective, and curative operation that permits most patients to live a full, active lifestyle. Although restorative proctocolectomy with IPAA has become increasingly popular during the past 3 decades, proctocolectomy with ileostomy can still be considered the first-line procedure for patients who choose not to undergo a restorative proctocolectomy and for those at significant risk for pouch failure, such as patients with impaired anal sphincter muscles, previous anoperineal disease, or limited physiological reserve secondary to comorbid conditions. When the expertise is available, minimally invasive surgery can be considered.

2. Total proctocolectomy with IPAA is an appropriate operation for selected patients with UC. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Total proctocolectomy with IPAA has become the most commonly performed procedure for patients with UC who require elective surgery. The operation, whether performed through an open procedure or, when expertise is available, by the use of minimally invasive techniques, is relatively safe and durable. IPAA is associated with an acceptable morbidity rate (19%–27%), an extremely low mortality rate (0.2%–0.4%), and a quality of life that approaches that of the healthy population. When deciding on IPAA, patient selection should consider factors such baseline continence, ability to undergo major pelvic surgery and its complications, and medical comorbidities.

3. Patients with UC considering pelvic operations should be counseled regarding the potential negative effects on sexual function and fertility. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Although many studies have shown no difference in fertility in women with UC compared with healthy controls, those who undergo surgical treatment for UC have a lower rate of conception compared with their nonsurgical counterparts. A greater percentage of women after IPAA require fertility treatments (18% vs 6%).

4. Total proctocolectomy with IPAA may be offered to selected UC patients with concomitant colorectal cancer. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   Ulcerative colitis patients with a concomitant carcinoma have postoperative complications and functional results comparable to colitis patients without cancer. Nearly 20% of UC patients with cancer who underwent an IPAA subsequently die of metastatic disease. A more conservative management approach has been advocated by some who recommend an abdominal colectomy with ileostomy followed by a restorative proctectomy after an observation period of at least 12 months to better ensure that no recurrent or distant disease develops.

5. Total proctocolectomy with IPAA may be offered to selected elderly patients with UC. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   IPAA in select elderly patients is safe and feasible. Chronologic age should not by itself be used as an exclusion criterion. However, careful consideration should be given to underlying comorbidities, as well as the patient's mental status and anal sphincter function. Pouch procedures are feasible in suitably motivated elderly individuals who understand the risks and potential functional difficulties that often accompany this procedure.

6. Mucosectomy and double-stapled procedures are both acceptable techniques in most circumstances. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Whereas the majority of patients undergo a double-stapled procedure, it is important that the surgeon performing an IPAA be familiar with both techniques in the event of failure or the inability to use a surgical stapler.

7. Pouch configuration may be chosen based on individual surgeon preference. Grade of Recommendation: Weak recommendation based on moderate-quality evidence, 2B.
   Several ileal pouch configurations have been devised in an attempt to reduce pouch complications and improve functional outcome. These include the double-loop J-pouch, the lateral isoperistaltic H-pouch, the triple-loop S-pouch, and the quadruple-loop W-pouch.

8. In carefully selected patients, a 1-stage IPAA can be considered. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   In general, those patients undergoing 1-stage procedures have been younger, healthier, less obese, without anemia or hypoalbuminemia, and on either no immunosuppressive medications or lower dosages. Furthermore, all technical aspects of the surgery were straightforward, with no excess blood loss, good blood supply to the ileal pouch, no anastomotic tension, and a visibly intact anastomosis. Proper patient counseling regarding risks and benefits, along with informed consent, are imperative.

9. Continent ileostomy is an alternative for patients with UC who are not eligible for or have had a failed restorative proctocolectomy. Grade of Recommendation: Weak recommendation based on moderate-quality evidence, 2B.
   The present role of the continent ileostomy, also known as the Kock pouch, is primarily confined to patients with poor sphincter function or a failed IPAA, or to those who are dissatisfied with a conventional Brooke ileostomy. This reduced role is the result of the success of the IPAA and the high rate of early and late complications associated with the continent ileostomy.

   Largely, this procedure has been relegated to surgeons with the expertise and experience of not only pouch construction, but also the aftercare of these patients as well.

10. Total abdominal colectomy with ileoproctostomy may be considered only in a highly selected group of patients with UC. Grade of Recommendation: Weak recommendation based on moderate-quality evidence, 2B.
    Caution should be exercised with this procedure in the setting of colonic dysplasia, or carcinoma in a potentially curative situation. Although the incidence of developing cancer seems low (0%–8% with long-term follow-up), patients undergoing total abdominal colectomy with ileorectal anastomosis must be willing to undergo annual endoscopic screening.

Postoperative Considerations

1. Routine surveillance of ileal pouches for dysplasia in the ileal mucosa is not warranted. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.
   Dysplastic and neoplastic transformation within the pouch performed in UC seems to be extremely rare, unlike the low, although slightly higher, rate seen in familial adenomatous polyposis. A decrease in villous height and increase in concentration of crypts have been observed in most ileal pouches. These metaplastic changes of the ileal mucosa to a colonic type mucosa are considered adaptations to the reservoir function of the pouch. Outside of symptoms, routine surveillance of the pouch does not appear to be beneficial or warranted.

2. Surveillance of the residual rectal cuff or the anal transition zone following restorative proctocolectomy may detect malignant degeneration. Grade of Recommendation: Strong recommendation based on weak-quality evidence, 1C.
   Although the optimal surveillance interval remains largely anecdotal, patients should be counseled about the risk of malignant degeneration in or near the anal transition zone, and can be offered periodic surveillance by endoscopic or anoscopic means every few years, or when symptomatic.

3. Pouchitis is common after IPAA and is managed with antibiotics in most circumstances. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.
   Clinical diagnosis may require confirmation by endoscopy and pouch mucosal biopsy. However, it seems that histologic evaluation may be omitted without compromising diagnostic accuracy, and therapy can be successful based on the appearance of the pouch and the appropriate clinical picture.

   Treatment of pouchitis relies primarily on antibiotics, such as metronidazole and ciprofloxacin. Probiotics have been used successfully in pouch patients to provide prophylaxis against pouchitis and to maintain remission in chronic pouchitis.

Definitions:

The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) System–Grading Recommendations*

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
1A	Strong recommendation, high-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1B	Strong recommendation, moderate-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
1C	Strong recommendation, low- or very-low-	Benefits clearly outweigh risk and burdens or vice versa	Observational studies or case series	Strong recommendation but may change when higher-quality evidence becomes

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
2A	Weak recommendation, high quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2B	Weak recommendations, moderate-quality evidence	Benefits closely balanced with risks and burdens	RCTs with important limitations (inconsistent results, methodological flaws, indirect or imprecise) or exceptionally strong evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
2C	Weak recommendation, low- or very-low-quality evidence	Uncertainty in the estimates of benefits, risks and burden; benefits, risk and burden may be closely balanced	Observational studies or case series	Very weak recommendations; other alternatives may be equally reasonable

RCTs = randomized controlled trials

*Adapted from Guyatt G, Gutterman D, Baumann MH, et al. Grading strength of recommendations and quality of evidence in clinical guidelines: report from an American College of Chest Physicians Task Force. Chest. 2006;129:174–181. Used with permission.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

Ulcerative colitis (UC)

Guideline Category

Management

Risk Assessment

Treatment

Clinical Specialty

Colon and Rectal Surgery

Gastroenterology

Internal Medicine

Oncology

Intended Users

Advanced Practice Nurses

Health Care Providers

Nurses

Patients

Physician Assistants

Physicians

Guideline Objective(s)

To provide practice parameters for the surgical treatment of ulcerative colitis (UC)

Target Population

Patients with ulcerative colitis (UC)

Interventions and Practices Considered

1. Surgical consultation
2. Medical therapy:
    - Cyclosporine
    - Monoclonal antibody therapy
3. Cancer risk interventions:
    - Endoscopic surveillance (random biopsies of colon and rectum, directed biopsies of suspicious lesions)
    - Total proctocolectomy, with or without ileal pouch-anal anastomosis (IPAA)
    - Stricture resection
4. Surgical options:
    - Total or subtotal abdominal colectomy with end ileostomy (emergency)
    - Total proctocolectomy with ileostomy/total proctocolectomy with IPAA
    - Mucosectomy and double-stapled procedures
    - Pouch configurations
    - Continent ileostomy
    - Total abdominal colectomy with ileoproctostomy
    - 1-stage IPAA
5. Counseling on potential side effects of pelvic operations
6. Postoperative considerations:
    - Surveillance of residual rectal cuff or anal transition zone
    - Antibiotics for pouchitis

Major Outcomes Considered

- Safety and efficacy of surgeries
- Post-operative morbidity, mortality, and quality of life
- Risk of cancer or dysplasia
- Complications of surgical therapy

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

These guidelines are built on the last set of the American Society of Colon and Rectal Surgeons Practice Parameters for treatment of ulcerative colitis (UC) published in 2005. An organized search of MEDLINE, PubMed, and the Cochrane Database of Collected Reviews was performed through July 2013. Keyword combinations included inflammatory bowel disease, ulcerative colitis, ileal pouch-anal anastomosis, ileostomy, proctocolectomy, colorectal neoplasm, surgery, colectomy, ileoproctostomy, immunomodulator, infliximab, steroids, and related articles. Directed searches of the embedded references from the primary articles also were accomplished.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

See the "Rating Scheme for the Strength of the Recommendations" field.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

These guidelines are built on the last set of the American Society of Colon and Rectal Surgeons Practice Parameters for treatment of UC published in 2005. The final grade of recommendation was performed using the Grading of Recommendation Assessment, Development, and Evaluation (GRADE) system (see the "Rating Scheme for the Strength of the Recommendations" field).

Rating Scheme for the Strength of the Recommendations

The Grading of Recommendations Assessment, Development, and Evaluation (GRADE) System–Grading Recommendations*

	Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence	Implications
1A	Strong recommendation, high-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	RCTs without important limitations or overwhelming evidence from observational studies	Strong recommendation, can apply to most patients in most circumstances without reservation
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1C	Strong recommendation, low- or very-low-quality evidence	Benefits clearly outweigh risk and burdens or vice versa	Observational studies or case series	Strong recommendation but may change when higher-quality evidence becomes available
2A	Weak recommendation, high quality evidence	Benefits closely balanced with risks and burdens	RCTs without important limitations or overwhelming evidence from observational studies	Weak recommendation, best action may differ depending on circumstances or patients' or societal values
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Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Not stated

Description of Method of Guideline Validation

Not applicable

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate surgical treatment of patients with ulcerative colitis (UC)

Potential Harms

Complications of Surgical Therapy

- *Total Proctocolectomy with Ileostomy*: Stoma-associated problems, such as stenosis and prolapse, are most frequent; other complications that are common to any abdominal/pelvic procedure also have been recognized following this operation. These include small-bowel obstruction, infection/fistula, persistent pain, unhealed perineal wound, sexual and bladder dysfunction, and infertility.
- *Total Abdominal Colectomy with Ileoproctostomy*: Disadvantages are related to the long-term durability of the procedure. Studies demonstrate a 12% to 53% failure rate with follow-up of at least 3.5 years. In addition, the theoretical risk for of developing cancer in the remaining rectum should be considered when counseling the patient about surgical options. Caution should be exercised with this procedure in the setting of colonic dysplasia, or carcinoma in a potentially curative situation.
- *Continent Ileostomy*: Early complications, most commonly sepsis (secondary to suture line leaks, fistulas, and stomal necrosis) and obstruction, are seen in approximately one-fourth to one-third of patients. Late complications occur in up to 60% of patients and include incontinence and obstruction secondary to disruption or dysfunction of the valve. Valve revision is required in up to 60% of patients. Although valve prolapse has been reduced with stapling techniques, the overall pouch failure rate has not decreased.
- *Total Proctocolectomy with Ileal Pouch-Anal Anastomosis (IPAA)*: Complications include risks arising from the pelvic dissection such as infertility or sexual dysfunction and pouch-specific complications, such as pouchitis. Additionally, anastomotic leak with pelvic sepsis, fistula, stricture, and cuff inflammation may occur. The most frequent long-term complication after IPAA is a nonspecific inflammation of the ileal pouch known as pouchitis. Ileal inflammation extending proximal to the pouch in the neoterminal ileum has been recently described and termed prepouch ileitis.
- *One-Stage IPAA*: Complications include risks of dehydration, wound infection, ileostomy closure leak and fistula, ileoanal anastomotic stricture, and small-bowel obstruction, as well as a slightly increased rate of anastomotic leak rates and pelvic sepsis.

Complications of Medical Therapy

Concerns about using biological agents are related to the large percentage of patients who ultimately require colectomy, and safety issues that are primarily infectious complications.

Contraindications

Contraindications

- Metastatic disease is generally considered a contraindication to ileal pouch-anal anastomosis (IPAA). Another group of patients who may not be eligible for IPAA are those with cancer of the mid or low rectum.
- Total abdominal colectomy with ileoproctostomy requires a relatively normal rectum to create a safe anastomosis; severe rectal inflammation and marked decrease in rectal compliance are contraindications to the procedure. Severe anoperineal disease, although unusual in ulcerative colitis (UC), also precludes an ileorectal anastomosis.

Qualifying Statements

Qualifying Statements

Qualifying Statements

- These guidelines are inclusive and not prescriptive. Their purpose is to provide information on which decisions can be made, rather than dictate a specific form of treatment.
- It should be recognized that these guidelines should not be deemed inclusive of all proper methods of care or exclusive of methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding the propriety of any specific procedure must be made by the physician in light of all of the circumstances presented by the individual patient.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Ross H, Steele SR, Varma M, Dykes S, Cima R, Buie WD, Rafferty J, Standards Practice Task Force of the American Society of Colon and Rectal Surgeons. Practice parameters for the surgical treatment of ulcerative colitis. Dis Colon Rectum. 2014 Jan;57(1):5-22. [299 references] PubMed

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

1997 (revised 2014 Jan)

Guideline Developer(s)

American Society of Colon and Rectal Surgeons - Medical Specialty Society

Source(s) of Funding

American Society of Colon and Rectal Surgeons

Guideline Committee

Standards Practice Task Force of the American Society of Colon and Rectal Surgeons

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Cohen JL, Strong SA, Hyman NH, Buie WD, Dunn GD, Ko CY, Fleshner PR, Stahl TJ, Kim DG, Bastawrous AL, Perry WB, Cataldo PA, Rafferty JF, Ellis CN, Rakinic J, Gregorcyk S, Shellito PC, Kilkenny JW 3rd, Ternent CA, Koltun W, Tjandra JJ, Orsay CP, Whiteford MH, Penzer JR, Standards Practice Task Force American Society of Colon and Rectal Surgeons. Practice parameters for the surgical treatment of ulcerative colitis. Dis Colon Rectum. 2005 Nov;48(11):1997-2009. [165 references]

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the American Society of Colon and Rectal Surgeons (ASCRS) Web site.

Print copies: Available from the American Society of Colon and Rectal Surgeons (ASCRS), 85 W. Algonquin Road, Suite 550, Arlington Heights, Illinois 60005.

Availability of Companion Documents

None available

Patient Resources

The following are available:

- Ulcerative colitis. Patient brochure. 2012. Electronic copies: Available from the American Society of Colon and Rectal Surgeons (ASCRS) Web site .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This summary was completed by ECRI on February 15, 2000. The information was verified by the guideline developer as November 7, 2000. This NGC summary was updated by ECRI Institute on May 31, 2007. This summary was updated by ECRI Institute on July 28, 2008 following the U.S. Food and Drug Administration advisory on fluoroquinolone antimicrobial drugs. This summary was updated by ECRI Institute on August 18, 2009, following the revised FDA advisory on CellCept (mycophenolate mofetil). This summary was updated by ECRI Institute on February 17, 2014. This summary was updated by ECRI Institute on May 18, 2016 following the U.S. Food and Drug Administration advisory on Fluoroquinolone Antibacterial Drugs.

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